

General

Guideline Title

Practice advisory for the prevention of perioperative peripheral neuropathies 2018: an updated report by the American Society of Anesthesiologists Task Force on Prevention of Perioperative Peripheral Neuropathies.

Bibliographic Source(s)

Practice advisory for the prevention of perioperative peripheral neuropathies 2018: an updated report by the American Society of Anesthesiologists Task Force on Prevention of Perioperative Peripheral Neuropathies. Anesthesiology. 2018 Jan;128(1):11-26. [77 references] [PubMed](#)

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Society of Anesthesiologists Task Force on Prevention of Perioperative [trunc]. Practice advisory for the prevention of perioperative peripheral neuropathies: an updated report by the American Society of Anesthesiologists Task Force on prevention of perioperative peripheral neuropathies. Anesthesiology. 2011 Apr;114(4):741-54. [79 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

NEATS Assessment

National Guideline Clearinghouse (NGC) has assessed this guideline's adherence to standards of trustworthiness, derived from the Institute of Medicine's report [Clinical Practice Guidelines We Can Trust](#).

■■■■= Poor ■■■= Fair ■■■= Good ■■■= Very Good ■■■= Excellent

Assessment	Standard of Trustworthiness
YES	Disclosure of Guideline Funding Source
■■■■	Disclosure and Management of Financial Conflict of Interests

	Guideline Development Group Composition
UNKNOWN	Multidisciplinary Group
YES	Methodologist Involvement
■□□□	Patient and Public Perspectives
	Use of a Systematic Review of Evidence
■■■■■	Search Strategy
■■■■■	Study Selection
■■■■■	Synthesis of Evidence
	Evidence Foundations for and Rating Strength of Recommendations
■■■■■	Grading the Quality or Strength of Evidence
■■■■■	Benefits and Harms of Recommendations
■■■■■	Evidence Summary Supporting Recommendations
■□□□	Rating the Strength of Recommendations
■■■□□	Specific and Unambiguous Articulation of Recommendations
■■■□□	External Review
■■■□□	Updating

Recommendations

Major Recommendations

Preoperative History and Physical Assessment

Review a patient's preoperative history and perform a physical examination to identify: body habitus, preexisting neurologic symptoms, diabetes mellitus, peripheral vascular disease, alcohol dependency, arthritis, and sex (e.g., male sex and its association with ulnar neuropathy). When judged appropriate, ascertain whether patients can comfortably tolerate the anticipated operative position.

Positioning Strategies for the Upper Extremities

Positioning Strategies to Reduce Perioperative Brachial Plexus Neuropathy

When possible, limit arm abduction in a supine patient to 90°.

The prone position may allow patients to comfortably tolerate abduction of their arms to greater than 90°.*

Positioning Strategies to Reduce Perioperative Ulnar Neuropathy

Supine Patient with Arm on an Armboard: Position the upper extremity to decrease pressure on the postcondylar groove of the humerus (ulnar groove).

Use of either supination or the neutral forearm positions may be used to facilitate this action.

Supine Patient with Arms Tucked at Side: Place the forearm in a neutral position.

Flexion of the Elbow: When possible, avoid flexion of the elbow to decrease the risk of ulnar neuropathy.†

Positioning Strategies to Reduce Perioperative Radial Neuropathy

Avoid prolonged pressure on the radial nerve in the spiral groove of the humerus.

Positioning Strategies to Reduce Perioperative Median Neuropathy

Avoid extension of the elbow beyond the range that is comfortable during the preoperative assessment to prevent stretching of the median nerve.

Periodic Assessment of Upper Extremity Position during Procedures

Periodic perioperative assessments may be performed to ensure maintenance of the desired position.

Positioning Strategies for the Lower Extremities

Positioning Strategies to Reduce Perioperative Sciatic Neuropathy

Stretching of the Hamstring Muscle Group: Positions that stretch the hamstring muscle group beyond the range that is comfortable during the preoperative assessment may be avoided to prevent stretching of the sciatic nerve.

Limiting Hip Flexion: Since the sciatic nerve or its branches cross both the hip and the knee joints, assess extension and flexion of these joints when determining the degree of hip flexion.

Positioning Strategies to Reduce Perioperative Femoral Neuropathy

When possible, avoid extension or flexion of the hip to decrease the risk of femoral neuropathy.

Positioning Strategies to Reduce Perioperative Peroneal Neuropathy

Avoid prolonged pressure on the peroneal nerve at the fibular head.

Protective Padding

Padded armboards may be used to decrease the risk of upper extremity neuropathy.

Chest rolls in the laterally positioned patient may be used to decrease the risk of upper extremity neuropathy.

Padding at the elbow may be used to decrease the risk of upper extremity neuropathy.

Specific padding to prevent pressure of a hard surface against the peroneal nerve at the fibular head may be used to decrease the risk of peroneal neuropathy.

Avoid the inappropriate use of padding (e.g., padding too tight) to decrease the risk of perioperative neuropathy.

Equipment

When possible, avoid the improper use of automated blood pressure cuffs on the arm (i.e., placed below the antecubital fossa) to reduce the risk of upper extremity neuropathy.

When possible, avoid the use of shoulder braces in a steep head-down position to *decrease* the risk of perioperative neuropathies.

Postoperative Physical Assessment

Perform a simple postoperative assessment of extremity nerve function for early recognition of peripheral

neuropathies.

Documentation

Document specific perioperative positioning actions that may be useful for continuous improvement processes.‡

*The Task Force notes that the prone position affects shoulder and brachial plexus mobility differently than does the supine position.

†There is no consensus on an acceptable degree of flexion during the perioperative period.

‡Documentation may result in improvements by helping practitioners focus attention on relevant aspects of patient positioning and providing information on positioning strategies that may eventually lead to improvements in patient care.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Perioperative peripheral neuropathies

Note: This Advisory does not focus on compartment syndromes or neuropathies that may be associated with anesthetic techniques (e.g., spinal anesthesia).

Guideline Category

Evaluation

Management

Prevention

Clinical Specialty

Anesthesiology

Neurology

Nursing

Surgery

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Health Care Providers

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

- To educate American Society of Anesthesiologists (ASA) members
- To provide a reference framework for individual practices
- To stimulate the pursuit and evaluation of strategies that may prevent or reduce the frequency of occurrence or minimize the severity of peripheral neuropathies that may be related to perioperative positioning of patients

Target Population

Adult patients who are or have been sedated or anesthetized

Interventions and Practices Considered

1. Preoperative history and physical assessment
2. Positioning strategies
 - Upper extremities
 - Lower extremities
3. Protective padding
 - Padded armboards
 - Chest rolls
 - Padding at the elbow
 - Padding to protect the peroneal (fibular) nerve
4. Equipment
 - Automated blood pressure cuffs
 - Shoulder braces (not recommended)
5. Postoperative physical assessment
6. Documentation of specific perioperative positioning actions

Major Outcomes Considered

Postoperative signs and symptoms related to peripheral nerve injury (e.g., brachial plexus, sciatic, and femoral) including:

Paresthesia
Muscle weakness
Tingling in the extremities
Pain in extremities

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

In 2016, the American Society of Anesthesiologists (ASA) Committee on Standards and Practice Parameters requested that scientific evidence for this Advisory be updated. The update consists of an evaluation of literature that includes new studies obtained after publication of the original Advisory.

State of the Literature

For the systematic review, potentially relevant clinical studies were identified via electronic and manual searches. Healthcare database searches included PubMed, EMBASE, Web of Science, Google Books, and the Cochrane Central Register of Controlled Trials. The searches covered a 7.5-yr period from January 1, 2010, through July 31, 2017. Accepted studies from the previous updated Advisory were also re-reviewed, covering the period of January 1, 1999, through July 31, 2009. Search terms consisted of the interventions indicated in Appendix 2 of the original guideline document guided by the appropriate inclusion/exclusion criteria as stated in the "Focus" section in the original guideline document. Only studies containing original findings from peer-reviewed journals were acceptable. Editorials, letters, and other articles without data were excluded. Seven hundred and ninety-five new citations were identified and reviewed, with 31 new studies meeting the above stated criteria. These studies were combined with 83 pre-2010 articles used in the previous Advisory. A literature search strategy and Preferred Reporting Items of Systematic reviews and Meta-Analyses (PRISMA) flow diagram are available as supplemental digital content (see the "Availability of Companion Documents" field).

Number of Source Documents

A total of 114 articles were found acceptable as evidence for this Advisory. A complete bibliography of articles used to develop this Advisory, organized by section, is available (see the "Availability of Companion Documents" field).

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Scientific Evidence

The scientific evidence used in the development of this Advisory is based on cumulative findings from literature published in peer-reviewed journals. Literature citations are obtained from healthcare databases, direct internet searches, Task Force members, liaisons with other organizations, and manual searches of references located in reviewed articles.

Findings from the aggregated literature are reported in the text of this Advisory by evidence category, level, and direction and in appendix 2 of the original guideline document. Evidence categories refer specifically to the strength and quality of the *research design* of the studies. Category A evidence represents results obtained from randomized controlled trials (RCTs), and Category B evidence represents observational results obtained from nonrandomized study designs or RCTs without pertinent comparison groups. When available, Category A evidence is given precedence over Category B evidence for any particular outcome. These evidence categories are further divided into evidence levels. Evidence levels refer specifically to the strength and quality of the summarized study *findings* (i.e., statistical findings, type of data, and the number of studies reporting/replicating the findings). In this document, only the highest level of evidence is included in the summary report for each intervention–outcome pair, including a directional designation of benefit, harm, or equivocal.

Category A

RCTs report comparative findings between clinical interventions for specified outcomes. Statistically significant ($P < 0.01$) outcomes are designated as either beneficial (B) or harmful (H) for the patient; statistically nonsignificant findings are designated as equivocal (E).

Level 1: The literature contains a sufficient number of RCTs to conduct meta-analysis,§ and meta-analytic findings from these aggregated studies are reported as evidence.

Level 2: The literature contains multiple RCTs, but the number of RCTs is not sufficient to conduct a viable meta-analysis for the purpose of this Advisory. Findings from these RCTs are reported separately as evidence.

Level 3: The literature contains a single RCT, and findings from this study are reported as evidence.

Category B

Observational studies or RCTs without pertinent comparison groups may permit *inference* of beneficial or harmful relationships among clinical interventions and clinical outcomes. Inferred findings are given a directional designation of beneficial (B), harmful (H), or equivocal (E). For studies that report statistical findings, the threshold for significance is $P < 0.01$.

Level 1: The literature contains nonrandomized comparisons (e.g., quasiexperimental, cohort [prospective or retrospective], or case-control research designs) with comparative statistics between clinical interventions for a specified clinical outcome.

Level 2: The literature contains noncomparative observational studies with associative statistics (e.g., relative risk, correlation, sensitivity and specificity).

Level 3: The literature contains noncomparative observational studies with descriptive statistics (e.g., frequencies, percentages).

Level 4: The literature contains case reports.

Insufficient Literature

The *lack* of sufficient scientific evidence in the literature may occur when the evidence is either unavailable (i.e., no pertinent studies found) or inadequate. Inadequate literature cannot be used to assess relationships among clinical interventions and outcomes because a clear interpretation of findings is not obtained due to methodologic concerns (e.g., confounding of study design or implementation) or the study does not meet the criteria for content as defined in the "Focus" of the Advisory.

Opinion-based Evidence

All opinion-based evidence from the original Advisory† (e.g., survey data, open-forum testimony, internet-based comments, letters, and editorials) relevant to each topic was considered in the development of this Advisory. Only the findings obtained from formal surveys are reported in this document.

Opinion surveys were developed by the Task Force to address each clinical intervention identified in the document. Identical surveys were distributed to expert consultants and a random sample of members of the participating organizations.

Expert Opinion

Survey responses from Task Force–appointed expert consultants are reported in summary form in the text, with a complete listing of consultant survey responses reported in appendix 2 of the original guideline document.

Membership Opinion

Survey responses from active American Society of Anesthesiologists (ASA) members are reported in summary form in the text, with a complete listing of ASA member survey responses reported in appendix 2 of the original guideline document.

Informal Opinion

Open-forum testimony obtained during development of the original Advisory, internet-based comments, letters, and editorials are all informally evaluated and discussed during the formulation of Advisory recommendations. When warranted, the Task Force may add educational information or cautionary notes based on this information.

§All meta-analyses are conducted by the ASA methodology group. Meta-analyses from other sources are reviewed but not included as evidence in this document. Because a minimum of five independent RCTs are required for meta-analysis, meta-analyses were not conducted for this Practice Advisory.

†American Society of Anesthesiologists: Practice Advisory for the Prevention of Perioperative Peripheral Neuropathies: A report by the American Society of Anesthesiologists Task Force on Prevention of Perioperative Peripheral Neuropathies. *Anesthesiology* 2000; 92:1168–82.

Methods Used to Analyze the Evidence

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Each pertinent outcome reported in a study was classified by evidence category and level (see the "Rating Scheme for the Strength of the Evidence" field) and designated as beneficial, harmful, or equivocal. Findings were then summarized for each evidence linkage and reported in the text of the updated Advisory.

Consensus-based Evidence

For the original Advisory, consensus was obtained from multiple sources, including: (1) survey opinion from consultants who were selected based on their knowledge or expertise in perioperative positioning and peripheral neuropathy, (2) survey opinions from a randomly selected sample of active members of the American Society of Anesthesiologists (ASA), (3) testimony from attendees of a publicly held open forum at a national convention, (4) internet commentary, and (5) Task Force member opinion and interpretation. The survey rate of return was 56% (N = 84/150) for consultants and 29% (N = 433/1,500) for membership respondents.

The results of the original surveys are reported in tables 1–3 and in the text of the Advisory. The majority of consultants and ASA membership respondents agreed with the following survey items: (1) a focused preoperative history; (2) a focused preoperative examination to identify patients at risk for the development of peripheral neuropathies during the perioperative period; (3) upper extremity position should be periodically assessed during procedures; (4) limiting abduction of the arm(s) in a supine or prone patient may decrease the risk of brachial plexus neuropathy; (5) specific forearm position(s) in a supine patient with an arm(s) tucked at the side may decrease the risk of ulnar neuropathy; (6) specific forearm position(s) in a supine patient with an arm(s) abducted on an armboard may decrease the risk of ulnar neuropathy; (7) pressure in the spiral groove of the humerus from prolonged contact with a hard surface may increase the risk of radial neuropathy; (8) extension of the elbow in an anesthetized, supine patient beyond the normal range of extension that is comfortable during the preoperative exam may increase the risk of median neuropathy; (9) pressure near the fibular head from contact with a hard surface or a rigid support may increase the risk of peroneal neuropathy; (10) padded armboards may decrease the risk of upper extremity neuropathies; (11) a chest roll placed under the "downside" (dependent) lateral thorax in a patient who is positioned laterally may decrease the risk of brachial plexus neuropathy in the down arm; (12) specific padding (e.g., foam or gel pads) at the elbow may decrease the risk of ulnar neuropathy; (13) specific padding to prevent contact of the peroneal nerve (at the fibular head) with a hard surface may decrease the risk of peroneal neuropathy; (14) in some circumstances, the use of padding may increase the risk of peripheral neuropathies; (15) shoulder braces (commonly placed over the acromioclavicular joint) to prevent a patient from sliding cephalad when placed in a steep head-down position may increase the risk of brachial plexus neuropathy; (16) examining

the patient in the postanesthesia care unit (PACU) may lead to early recognition of peripheral neuropathy; and (17) documentation on an anesthetic record of specific positioning actions during the care of a patient is important. Items where no majority agreement was indicated were: (1) flexion of the elbow may increase the risk of ulnar neuropathy; (2) stretching of the hamstring muscle group (e.g., biceps femoris muscle) beyond the normal range of motion that is comfortable during the preoperative assessment may increase the risk of sciatic neuropathy; (3) extension of the hip in an anesthetized, supine patient beyond the normal range of extension that is comfortable during the preoperative exam (e.g., hyperlordosis) may increase the risk of femoral neuropathy; and (4) the use of an automated blood pressure cuff on the arm may increase the risk of ulnar, radial, or median neuropathy.

Consultants and ASA membership respondents who agreed with the above survey items responded to specific item-related topics. The majority of these respondents agreed with the following items: (1) preexisting patient attributes that are important to review during a preoperative history include but are not limited to body habitus, preexisting neurologic symptoms, diabetes mellitus, peripheral vascular disease, alcohol dependency, and arthritis; (2) in a patient examination, it is important to assess limitations to joint range of motion in the elbow and/or shoulder, range of motion of an arthritic neck, range of motion of the hip and knee joints (for placing patients in a lateral or lithotomy position), ability to extend hips (for placing patients in a supine position), and flexibility of the hamstring muscle group (for placing patients in a lateral or lithotomy position); (3) the upper limit of abduction of the arm(s) in a supine or prone patient should be 90°; (4) in a supine patient with an arm(s) tucked at the side, the forearm in the neutral position may decrease the risk of ulnar neuropathy; (5) in a supine patient with an arm(s) abducted on an armboard, the forearm in the supinated position may decrease the risk of ulnar neuropathy; (6) elbow flexion greater than 90° may increase the risk of ulnar neuropathy; (7) the risk of sciatic neuropathy in a patient who is positioned in a lithotomy position may be reduced if the degree of hip flexion is limited to 90°; and (8) it is important to document overall patient position (e.g., supine, prone, lateral, lithotomy), position of arms, position of lower extremities, use of specific padding at the elbow or over the fibular head, specific positioning action(s) taken or used during a procedure as indicated by findings on a preoperative examination, and the presence or absence of signs or symptoms of peripheral neuropathy in the PACU.

A majority was not obtained for the following items: (1) sex as an important attribute to review in a focused preoperative history; (2) flexibility of the hamstring muscle group (for placing patients in a lateral or lithotomy position) as important to assess in a preoperative examination; (3) the degree of hip flexion for reducing the risk of femoral neuropathy in a patient placed in a lithotomy position; and (4) the type of leg holder used for a patient in a lithotomy position as an important attribute to document.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Task Force Members and Consultants

In 2016, the American Society of Anesthesiologists (ASA) Committee on Standards and Practice Parameters requested that scientific evidence for this Advisory be updated. The update consists of an evaluation of literature that includes new studies obtained after publication of the original Advisory.

The original Advisory was developed by an ASA-appointed task force of 10 members, consisting of anesthesiologists in private and academic practices from various geographic areas of the United States, and two methodologists from the ASA Committee on Standards and Practice Parameters.

The Task Force developed the original Advisory by means of a six-step process. First, they reached consensus on the criteria for evidence. Second, original published articles from peer-reviewed journals relevant to perioperative peripheral neuropathy were evaluated. Third, consultants who had expertise or

interest in peripheral neuropathy and who practiced or worked in various settings (e.g., academic and private practice) were asked to: (1) participate in opinion surveys on the effectiveness of various perioperative management strategies, and (2) review and comment on a draft of the Advisory developed by the Task Force. Fourth, additional opinions were solicited from random samples of active members of the ASA. Fifth, the Task Force held an open forum at a national anesthesia meeting to solicit input on the key concepts of this Advisory.[‡] Sixth, all available information was used to build consensus within the Task Force to finalize the Advisory. A summary of recommendations is found in Appendix 1.

[‡]Society for Ambulatory Anesthesia 14th Annual Meeting, Seattle, Washington, April 30, 1999.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This Practice Advisory submitted for publication September 1, 2017; accepted for publication September 21, 2017; and approved by the ASA House of Delegates, October 25, 2017.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

Evidence was obtained from two principal sources: scientific evidence and opinion-based evidence.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Documentation may result in improvements by helping practitioners focus attention on relevant aspects of patient positioning and providing information on positioning strategies that may eventually lead to improvements in patient care.

Refer to the "Literature Findings" sections in the original guideline document for potential benefits of specific interventions.

Potential Harms

The inappropriate use of padding (e.g., padding too tight) may increase the risk of perioperative

neuropathy.

Refer to the "Literature Findings" sections in the original guideline document for potential harms of specific interventions.

Qualifying Statements

Qualifying Statements

- Practice Advisories are systematically developed reports that are intended to assist decision-making in areas of patient care. Advisories provide a synthesis of scientific literature and analysis of expert opinion, clinical feasibility data, open forum commentary, and consensus surveys. Practice advisories developed by the American Society of Anesthesiologists (ASA) are not intended as standards, guidelines, or absolute requirements, and their use cannot guarantee any specific outcome. They may be adopted, modified, or rejected according to clinical needs and constraints, and they are not intended to replace local institutional policies.
- Practice Advisories are not supported by scientific literature to the same degree as standards or guidelines because of the lack of sufficient numbers of adequately controlled studies. Practice advisories are subject to periodic revision as warranted by the evolution of medical knowledge, technology, and practice.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Practice advisory for the prevention of perioperative peripheral neuropathies 2018: an updated report by the American Society of Anesthesiologists Task Force on Prevention of Perioperative Peripheral Neuropathies. *Anesthesiology*. 2018 Jan;128(1):11-26. [77 references] [PubMed](#)

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2018 Jan

Guideline Developer(s)

American Society of Anesthesiologists - Medical Specialty Society

Source(s) of Funding

Support was provided solely from institutional and/or departmental sources.

Guideline Committee

American Society of Anesthesiologists Committee on Standards and Practice Parameters

Composition of Group That Authored the Guideline

Committee Members: Jeffrey L. Apfelbaum, MD (*Chair*), Chicago, Illinois; Madhulika Agarkar, MPH, Schaumburg, Illinois; Richard T. Connis, PhD, Woodinville, Washington; David G. Nickinovich, PhD, Bellevue, Washington; Mark A. Warner, MD, Rochester, Minnesota

Financial Disclosures/Conflicts of Interest

The authors declare no competing interests.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Society of Anesthesiologists Task Force on Prevention of Perioperative [trunc]. Practice advisory for the prevention of perioperative peripheral neuropathies: an updated report by the American Society of Anesthesiologists Task Force on prevention of perioperative peripheral neuropathies. *Anesthesiology*. 2011 Apr;114(4):741-54. [79 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available in from the [Anesthesiology Journal Web site](#) .

Availability of Companion Documents

The following are available:

Practice advisory for the prevention of perioperative peripheral neuropathies 2018: an updated report by the American Society of Anesthesiologists Task Force on Prevention of Perioperative Peripheral Neuropathies. Literature search summary and PRISMA flow diagram. Schaumburg (IL): American Society of Anesthesiologists; 2018. 2 p. Available from the [Anesthesiology Journal Web site](#) .

Practice advisory for the prevention of perioperative peripheral neuropathies 2018: an updated report by the American Society of Anesthesiologists Task Force on Prevention of Perioperative Peripheral Neuropathies. Bibliography. Schaumburg (IL): American Society of Anesthesiologists; 2018. 6 p. Available from the [Anesthesiology Journal Web site](#) .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on December 13, 2011. This summary was updated by ECRI Institute on March 13, 2018. The guideline developer agreed to not review the content.

This NEATS assessment was completed by ECRI Institute on March 15, 2018. The information was verified by the guideline developer on April 8, 2018.

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